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# MEASURING THE PROGRESS OF EXTENSION WORK

A Study of 404 Farms and Farm Homes in Blue Earth and  
Lyon Counties, Minnesota, 1927

By M. C. WILSON  
In Charge Extension Studies,  
Office of Co-operative Extension Work  
U. S. Department of Agriculture

and

S. B. CLELAND  
Assistant County Agent Leader, College of Agriculture  
University of Minnesota

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### Purpose of Study

The study reported in this bulletin was undertaken in order more definitely to measure the progress of extension teaching. Information was obtained regarding improved practices adopted by farmers and farm women as the result of extension teaching; also regarding the means and agencies employed in extension teaching which they thought had in any way influenced the acceptance of better practices taught.<sup>1</sup>

### Collection of Data

The data were collected by the survey method, representatives of the Extension Service calling at every farm within the areas selected and obtaining the information direct from the persons concerned. Those assisting with the field work were experienced extension workers.<sup>2</sup> Before going to the field the members of the survey party were trained in the use of the questionnaire cards (Page 4) and thoroly acquainted with the extension programs and activities in the areas studied over a period of years. The schedules were carefully checked at headquarters each day and all errors and inconsistencies corrected immediately. Data were obtained from 404 farms and farm homes about equally divided between Blue Earth and Lyon Counties. This is approximately 90 per cent of all the farms located in four townships. No information was obtained from persons living in the open country or in small villages who were not actually operating farms.

### Areas in Two Counties Studied

Both counties have co-operated in the employment of extension agents for several years, and are considered representative of agricultural conditions in the southern part of the state. They were also thought to be free from unusual circumstances which would in any way lessen the value of the study. Within the counties, areas were selected that as nearly as possible represent average conditions, rather than areas where either unusually poor or particularly outstanding results have been obtained. The townships studied are located midway between the county seat and the county line, and are considered to have made the ordinary or average response to extension teaching.

<sup>1</sup> Similar studies have been made in Iowa, New York, Colorado, California, New Jersey, Georgia, Wisconsin, Arkansas, South Dakota, Illinois, and Pennsylvania.

<sup>2</sup> The authors appreciate the assistance rendered by Iva M. Sinn and J. M. Stedman of the United States Department of Agriculture; and F. J. Brown, W. L. Cavert, D. C. Dvoracek, W. P. Kirkwood, G. A. Sallee, and T. G. Stitts of the University of Minnesota, and County Agents Louis Kelehan and L. E. McMillan, in collecting field data.

Obverse Side of Questionnaire Card Used in Collecting Data

A

No. \_\_\_\_\_ Co. \_\_\_\_\_ Farm and Home Survey of the Results of Extension Work Date \_\_\_\_\_  
 Name \_\_\_\_\_ Address \_\_\_\_\_ Community \_\_\_\_\_  
 Owner \_\_\_\_\_ Tenant \_\_\_\_\_ Phone \_\_\_\_\_ Radio \_\_\_\_\_ Size of farm \_\_\_\_\_  
 Years: On farms in county \_\_\_\_\_ On this farm \_\_\_\_\_ Kind of road \_\_\_\_\_  
 Type of farming \_\_\_\_\_ Miles to agent's office \_\_\_\_\_ No. in family:  
 Adults \_\_\_\_\_ Children \_\_\_\_\_ Months hired help: F. \_\_\_\_\_ H. \_\_\_\_\_ No. children (10-20 yrs.) \_\_\_\_\_  
 No. in school (10-20) Member of what farmers' organizations \_\_\_\_\_  
 Leadership in extension work: Farm \_\_\_\_\_ Home \_\_\_\_\_  
 Extension activities on farm: Adult \_\_\_\_\_ Junior \_\_\_\_\_  
 In home: Adult \_\_\_\_\_ Junior \_\_\_\_\_  
 Other ext. act's att'd or participated in: Farm \_\_\_\_\_  
 Home \_\_\_\_\_ Contacts with Co. Agt. \_\_\_\_\_ H. Econ. Agt. \_\_\_\_\_  
 What specialists \_\_\_\_\_  
 Names of local extension leaders from whom assistance has been received \_\_\_\_\_

Farm and home practices adopted	Methods largely responsible (see list below)	Extension agents involved			Loc. Ldr. involved
		C. A.	H. E. A.	Spec'l	

2883 (5-5-27)

Reverse Side of Questionnaire Card Used in Collecting Data

A

List below names of members of family who have carried on a junior project.

Name	Present age	In school	Years in club work	Project	Why discontinued
a.					
b.					
c.					
d.					

How has your community benefited through extension work? \_\_\_\_\_

Suggestions for the improvement of the service \_\_\_\_\_

What agencies other than Extension do you rely on for assistance in connection with problems relating to: Farm \_\_\_\_\_

Home \_\_\_\_\_

Attitude toward extension work \_\_\_\_\_

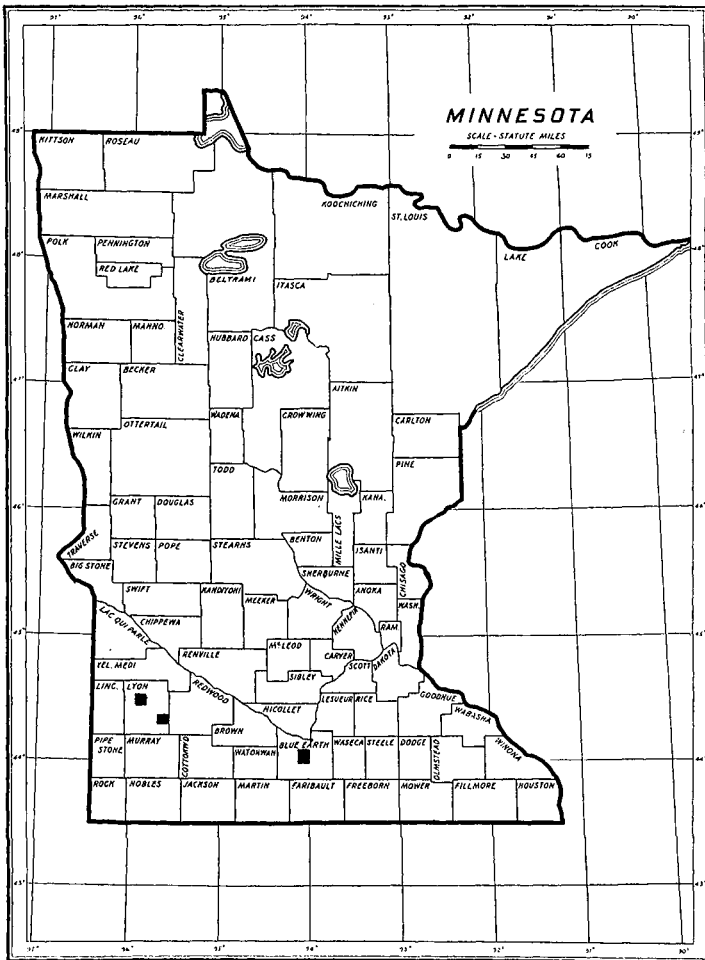
Remarks: \_\_\_\_\_

Abbreviations: Correspondence (cor.); office call (o.c.); telephone call (tel.); farm and home visit (f.v.); Leader training meeting (l.tr.); bulletin (bul.); circular letter (cir.l.); news story (n.s.); extension school or short course (e.s.); result demonstration: Adult (dem.a.); Junior (dem.jr.); method demonstration meeting (m.dem.); general meeting (mtg.); radio (r.); exhibit (exh.); poster (p.); indirect influence (ind.).

Extension Services of the University of Minnesota and of the United States Department of Agriculture co-operating.

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Lyon County has had a county agent continuously since 1918, and the county agent serving at the time of the survey was completing his sixth year. Blue Earth County has had agricultural extension work in continuous operation since 1918, with two agents in that time, the present agent having served since 1919. Blue Earth County has had home demonstration service since 1922, from 1922 to 1925 on a part-time basis, and since 1925 on a full-time basis.



Black Squares Indicate Areas Included in Survey.

Table 1. Extension Agents Employed, and Periods of Service

County Agricultural Agents	Home Demonstration Agents	Club Agents
	<b>BLUE EARTH COUNTY</b>	
M. R. Benedict 3-1-18 to 11-15-19	Susan A. Hough (part-time) 9-1-22 to 6-30-23	Maynard H. Coe 1-1-20 to 2-28-22
Leslie E. McMillan 12-8-19 to date of study	Eva L. Blair (part-time) 9-10-23 to 6-30-25	Clifford Lush 4 months, 1926
	Mrs. A. M. Erkel (full-time) 10-1-25 to date of study	Christian J. Arnold 2 months, 1927
	<b>LYON COUNTY</b>	
R. E. Hodgson 3-23-18 to 11-4-18	Eva L. Blair (part-time) (4 counties) 9-10-23 to 6-30-24	Harry Rose 3 months, 1926
Fremont E. Lange 11-20-18 to 11-22-19		4½ months, 1927
A. W. Malcolmson 1-1-20 to 11-30-21		
Louis Kelehan 12-1-21 to date of study		

### General Information Relating to Farms Studied

The 404 farm and home records included in this study were about equally divided between Lyon and Blue Earth Counties. Considering the two areas as a whole, 3 out of 5 of the farmers were land owners (Table 2). The average size of farm was 185 acres and the average distance from the county extension office was 10.4 miles. About half of the farmsteads were located on improved roads. Five hundred and nineteen children of club age were found in 53 per cent of the homes. Twenty-four per cent of the farms and 4 per cent of the homes had hired help during a part of the year. Telephones were reported for 84 per cent of the homes, and radios for 32 per cent.

Table 2. General Information Relating to Farms Included in Study

Item	Number	Percentage
Farm and home records obtained.....	404	..
Farms operated by owners.....	242	60
Farms operated by tenants .....	162	40
Farms with children (10-20 years).....	214	53
Children 10-20 years.....	519	..
Farms with hired help.....	95	24
Homes with hired help.....	16	4
Average size of farms (acres).....	185	..
Homes with telephones .....	340	84
Homes with radio.....	131	32
Farms located on improved road.....	192	48
Average distance to county extension office, mi. ....	10.4	..

**Membership in co-operative organizations.**—Co-operative creamery associations were the most important farmers' organizations from the standpoint of membership, having 47 per cent of the farmers enrolled (Table 3). The Farm Bureau and the livestock shipping association were next in order with 35 per cent of the farmers enrolled in each.

Twelve per cent of the farmers belonged to the Co-operative Oil Company and 11 per cent to the Co-operative Elevator Association.

Table 3. Membership in Co-operative Organizations

Name of organization	Number	Percentage
Co-operative Creamery .....	191	47
Livestock Shipping Assn. ....	143	35
Farm Bureau .....	143	35
Co-operative Oil Co. ....	49	12
Co-operative Elevator .....	43	11
Farmers' Mutual Fire Insurance Co. ....	11	3
Other associations .....	16	4

**Papers and magazines taken.**—That at least one daily newspaper was received regularly was reported for more than 80 per cent of the farms (Table 4), while local weekly newspapers came regularly to 52 per cent of the homes. More than 93 per cent of the farmers took agricultural papers, while home economics magazines were received in 69 per cent of the homes—an average of three farm papers and nearly two home magazines.

Table 4. Papers and Magazines Taken

Item	Percentage of all farms
Taking a daily paper .....	80.7
Taking a local weekly paper.....	52.2
Taking a farm paper .....	93.3
Average number farm papers taken.....	3.0
Taking a home economics magazine.....	69.1
Average number home economics magazines taken..	1.8

### Participation in Extension Activities and Contact with Extension Workers

Some member of the farm family either was serving or had served as a local leader in the community in 13 per cent of the farms (Table 5). Some form of extension activity such as a meeting or demonstration or 4-H club work was held on the farm or in the home in 35 per cent of the farms visited. An additional 46 per cent of the farms had been represented at such extension functions. Boys or girls in 21 per cent of the homes were enrolled in 4-H club work or had previously carried on a junior project. Contact with the county agricultural agent through office calls, farm and home visits, personal correspondence, attendance at meetings, or participation in other extension activities was reported for 90 per cent. Seventeen per cent (Blue Earth County 33 per cent) had made such contacts with the home demonstration agent, 45 per cent with the subject-matter specialists, and 34 per cent with the volunteer local extension leaders.



### Farmers and Farm Women Adopting Extension Practices

Nearly nine out of every ten farmers interviewed named definite practices adopted as the result of extension activities. An average of four specific changes in connection with which the extension service had had a part were listed (Table 6). The number of farm women reporting the adoption of home practices was slightly less than four out of ten, the average number of practices adopted being 1.5. Considering both agricultural and home economics practices, slightly more than 90 per cent of the farms had been definitely assisted by the extension system.

Table 5. Participation in Extension Activities and Contact with Extension Workers

Item	Number	Percentage
Farm and home records obtained.....	404	..
Farms and homes contributing local leaders.....	54	13
Farms with extension activities on farm or in home..	140	35
Other farms or homes participating in extension activities .....	185	46
Farms with boys or girls in club work.....	84	21
Farms reporting contact with:		
Any extension worker.....	365	90
County agricultural agent .....	365	90
Home demonstration agent .....	69	17
Home demonstration agent (Blue Earth County) .....	133	33
Subject matter specialist .....	180	45
Local leaders .....	137	34

Table 6. Farms and Homes Adopting Improved Practices

Item	Total
Farm and home records obtained.....	404
Per cent of farm adopting any practice.....	89
Average number all practices adopted.....	4.6
Per cent of farms adopting any practice.....	90
Average number agricultural practices adopted.....	4
Per cent homes adopting home economics practices.....	36
Average number home economics practices adopted.....	1.5

**Extension practices adopted.**—Of the 1673 improved practices reported, 1449 related to agriculture and 224 to home economics. The highest number of agricultural practices adopted was in connection with the poultry, dairy, alfalfa, and swine projects. The growing of improved varieties of grain and the adoption of disease control measures were also important.

In the home economics group the highest number of practices reported was adopted in connection with food preservation and the different phases of clothing.

A detailed list of these practices with the number and percentage of farms reporting the adoption of each is given in Table 7, page ten.



The Crops Specialist Discusses Alfalfa Growing at a Field Meeting

### **Types of Methods Which Influenced Farmers to Adopt Practices and Extension Agencies Involved**

An effort was made to ascertain which of the various extension methods had been influential in bringing about the adoption of each practice reported. These methods were clearly defined in the minds of the people concerned in the majority of cases. It was thought that certain individual methods had had an outstanding effect in some instances, while two or more agencies had been contributing influences in others. In some extension practices the direct means responsible were too remote to be recalled.

The means and agencies through which to extend the subject-matter information to the farming people may be roughly divided into three groups: (Table 8) (1) The publicity group—including general meetings, bulletins, circular letters, news stories, and similar means which broadcast the information which extension has to offer; (2) The personal-service group—including farm and home visits, office calls, local leader training, correspondence, and such agencies as render individual assistance to farmers and farm women; (3) The object lesson group—including adult and junior result demonstrations and method demonstrations which furnish proof that the practices advocated are of practical value and actually show how the work is done.

Methods classed under the publicity group influenced the highest number of farmers to adopt improved practices (66 per cent). Forty-eight per cent mentioned personal-service methods in connection with the practices changed; 34 per cent reported object lesson methods as having been influential. Sixty-five per cent adopted improved practices because of indirect spread from their neighbors. Often a farmer was influenced by methods falling in two or more groups.

Of the 365 farms for which changed practices were reported, 88 per cent gave some credit to the county agricultural agent, 14 per cent (Blue Earth County, 30 per cent) to the home demonstration agent, 43 per cent to the subject-matter specialists, and 31 per cent had received assistance from volunteer local extension leaders.

Table 7. Improved Practices Adopted by Farms or Homes

Practice	Number of farms or homes	Per cent of total
Agricultural practices		
Alfalfa .....	202	12.1
T. B. testing .....	159	9.5
Poultry culling .....	126	7.5
Oats varieties .....	107	6.4
Sweet clover .....	88	5.3
Swine diseases .....	119	7.1
Poultry feeding .....	73	4.4
Flax varieties .....	67	4.0
Poultry diseases .....	52	3.1
Swine feeding .....	42	2.5
Purebred sires .....	38	2.3
Poultry management .....	37	2.2
Dairy feeding .....	35	2.1
Oat smut treatment .....	34	2.0
Poultry housing .....	26	1.6
Cream marketing .....	25	1.5
Seed corn testing .....	23	1.4
Seed corn selection .....	16	1.0
Orchard spraying .....	15	0.9
Dairy records .....	15	.9
Livestock shipping .....	14	.8
Wheat smut treatment .....	13	.8
Swine management .....	11	.7
Land clearing .....	10	.6
Potato seed treatment.....	9	.5
Soybeans .....	8	.5
Orchard pruning .....	7	.4
Corn varieties .....	6	.4
Weed eradication .....	5	.3
Wheat varieties .....	4	.2
Co-operative creamery .....	4	.2
Plant disease control .....	3	.2
Barn plans .....	3	.2
Small fruits .....	3	.2
Purebred swine .....	3	0.2
Miscellaneous agriculture .....	47	2.8
Home economics practices		
Canning .....	77	4.6
Clothing .....	81	4.8
Nutrition .....	18	1.1
Millinery .....	10	0.6
Home decoration .....	6	.4
Pressure cookers .....	6	.4
Dress forms .....	4	.2
Meat curing .....	4	0.2
Miscellaneous home economics .....	18	1.1

Table 8. Methods Which Influenced Farmers to Change Practices and Extension Agents Involved

Item	Number of farms	Percentage
Farms on which some practice had been changed.....	365	90
Farmers influenced by:		
Publicity methods .....	266	66
Personal service methods.....	192	48
Object lesson methods .....	136	34
Indirect methods .....	263	65
Farmers influenced by:		
Agricultural agent .....	355	88
Home demonstration agent .....	57	14
Specialists .....	172	43
Farmers assisted by local leaders.....	127	31



Sweet Clover Is Being Rapidly Adopted as a Pasture Crop  
Every sweet clover pasture becomes a demonstration for neighbors and passers-by.

### Extension Methods Responsible for Practices Adopted

The relative frequency with which the different extension methods were reported in connection with improved practices adopted in agriculture and home economics, is shown in Table 9. It will be noted that the influence of more than one method was mentioned in connection with many of the practices. The indirect spread from one neighbor to another was involved in the adoption of more practices than any one of the direct means, having been responsible for about one-third of the entire number reported. The percentage of practices adopted through the influence of general meetings was almost as high. Office calls and news stories were credited with about 14 per cent each. Farm visits and bulletins were also important extension influences.

Forty-seven per cent of those adopting new practices were influenced by one or more methods of a publicity nature, 28 per cent by personal-service methods, and 14 per cent by object-lesson methods, while the indirect spread from all methods was reported in connection with 33 per cent.

While the frequency with which different extension methods reported as having influenced the adoption of practices is an indication of their relative importance, the interdependence of the various methods should not be overlooked. The news story must have a foundation in the work of the experiment station, a local result demonstration, or the successful practice of a good farmer. The bulletin may amplify an address given at a meeting, or the conversation incident to a farm visit or office call.

The confidence established through result demonstrations and farm or home visits doubtless has a bearing upon the effectiveness of general meetings, circular letters, and news items, which are better adapted to reaching large numbers of farmers.

Table 9. Relative Frequency with Which Extension Methods Were Reported

Method	Percentage of practices involved		
	Total	Agri- culture	Home economics
Indirect .....	32.7	35.3	15.6
Meeting .....	30.1	31.8	19.2
Office calls .....	14.9	17.2	.4
News stories .....	14.1	15.4	5.8
Method demonstrations .....	12.1	8.5	35.3
Farm visits .....	11.1	12.6	1.3
Bulletins .....	9.9	9.2	14.3
Leader training .....	3.1	1.6	12.9
Extension school .....	2.1	2.4	...
Correspondence .....	1.8	1.9	.9
Junior result demonstrations .....	1.5	.6	7.6
Radio .....	1.5	1.7	...
Circular letter .....	1.2	.9	3.1
Telephone .....	1.1	1.2	...
Adult result demonstrations .....	.9	1.0	...
Exhibit .....	.4	.3	.9
Poster .....	.3	.3	...



Farmers on a Dairy Tour Inspecting a Good Herd  
Meetings, indoor and out, are an important method of extension work.

### Factors Affecting the Adoption of Practices

In addition to the information obtained as to the number and nature of improved practices adopted as the result of extension teaching, and the means and agencies which had been effective in bringing about these improvements, data were collected which indicate the extent to which such fundamental factors as condition of land occupancy, size of farm, distance from extension office, nature of roads, educational training, participation in extension activities, and contact with extension workers influence the progress of extension work.

**Condition of land occupancy.**—Three farms out of five were operated by owners (Table 10). Only a slightly higher percentage of owners than tenants adopted new practices. This was true of both farm and home practices. The number adopted per 100 farms was only slightly greater for the owner-operator group than for the tenant-operator group, indicating that the effectiveness of the extension system is little influenced by conditions of land tenure.

Table 10. Condition of Land Occupancy in Relation to Change of Practices

Group	Number of farms	Percentage of all farms	Percentage of farms changing practices			Number of practices adopted per 100 farms
			Agric. practice	H. E. practice	Any practice	
Owner .....	242	60	90	37	92	436
Tenant .....	162	40	87	35	88	382

**Size of farm.**—For convenience in studying the effect of size on the adoption of extension practices, the farms were divided into three groups, the averages for which are 64, 142, and 296 acres (Table 11). Both the percentage of farms changing practices and the number of practices changed per 100 farms increased with the greater acreage. This tendency was shown in the homes as well as on the farms. Apparently the operators of large farms make greater use of the extension system than do operators of small farms.

Table 11. Relation of Size of Farms to Number of Farms Changing Practices

Number of acres	Number of farms	Average acreage	Percentage of farms changing practices			Number of practices adopted per 100 farms
			Agric. practice	H. E. practice	Any practice	
1-80 .....	80	64	85	29	86	342
81-160 .....	168	142	88	33	89	392
161 and over.....	156	296	92	44	94	475

**Distance from extension office.**—That the distance at which the farmstead is located from the county extension office has no important bearing on the effectiveness of extension work in these counties

is brought out by the comparison shown in Table 12. Slightly more of the farms and homes in the group located at the greater distance had changed practices than of those nearer the office. However, the variation in the distance is not great enough to be particularly significant.

Table 12. Relation of Distance of Farm from Extension Office to Change of Practices

Group	Number of farms	Average miles	Percentage of farms changing practices			Number of practices adopted per 100 farms
			Agric. practice	H. E. practice	Any practice	
1-10 miles .....	221	7.10	86	33	88	396
Over 10 miles...	183	14.54	93	40	93	437

**Nature of roads.**—Whether the farmstead is located on an improved highway or an ordinary country road seems to have had little influence on the adoption of improved practices (Table 13), since the number reported for the two groups of farms was practically the same.

Table 13. Nature of Roads in Relation to Change of Practices

Group	Number of farms	Percentage of farms	Percentage of farms changing practices			Number of practices adopted per 100 farms
			Agric. practice	H. E. practice	Any practice	
Improved roads ....	192	48	90	34	91	412
Unimproved roads..	212	52	89	38	90	416

**Telephone.**—More than five homes out of six were equipped with telephones and these adopted nearly 50 per cent more practices per 100 farms than did the homes without telephones (Table 14). Owing to the small percentage credited to the telephone (Table 9), it is probable that the telephone is a means through which people are informed regarding extension activities rather than a way of disseminating subject-matter information.

Table 14. Relation of Telephones to Farms Adopting Practices

Group	Number of farms	Percentage of all farms	Percentage of farms adopting practices			Number of practices adopted per 100 farms
			Agric. practice	H. E. practice	Any practice	
Farm having telephones .....	340	84	90	38	92	436
Farms without telephones .....	64	16	83	23	84	295

**Educational training.**—Slightly less than 2 per cent of the farmers and slightly more than 2 per cent of the farm women had received some college training. Approximately 12 per cent of both had attended high school. The farmers and farm women on the other farms had attended only a common school or had never gone to school.

One hundred per cent of the farmers with some high school or college training reported the adoption of extension practices as compared to 87.5 per cent of those with only a common school education or less. The number of practices adopted per 100 farms was approximately 50 per cent greater for the former group than for the latter (Table 15).

Table 15. Education of Farmers as Related to Adoption of Practices

Educational training	Number	Percentage of all farmers	Percentage adopting agricultural practices	Number of agricultural practices adopted per 100 farms
College or high school.....	55	13.6	100.0	485
Common school .....	345	85.4	87.5	337
No education reported or no man on farm .....	4	1.0	75.0	525



The County Agent Demonstrates the Treating of Potatoes by the Hot Formaldehyde Method

With farm women, the influence of education upon adoption of practices is even more marked—78 per cent of those with some college training adopted practices as compared to 58 per cent with high school training and 34 per cent with common school training or less. The number of practices adopted per 100 homes was twice as great in the high-school group as in the common-school group (Table 16).

Table 16. Education of Farm Women as Related to Adoption of Practices

Educational training	Number	Percentage of all farm women	Percentage adopting home economics practices	Number of home economics practices adopted per 100 homes
College or high school.....	57	14.1	61.4	111
Common school .....	322	79.7	34.2	50
No education reported or no woman on farm .....	25	6.2	4.0	4



**Participation in extension activities.**—Some formal extension activity—boy's club work, a demonstration, a meeting, or other activity—had been conducted on 35 per cent of the farms visited (Table 17). Of this group all but one per cent had definitely changed some farm or home practice. Another 46 per cent had been represented at such extension functions on a neighbor's farm or at a community center, and of this number 97 per cent had put into regular practice the information received. Of the 19 per cent who had not participated in any extension activity, 60 per cent had been influenced to adopt extension practices. The number of practices changed per 100 farms was from three to five times as great for the first two groups as for the last group, indicating that participation in extension activities is an important factor in the adoption of improved practices.

Table 17. Participation in Extension Activities as Bearing on the Change of Practices

Group	Number of farms	Percentage of all farms	Percentage of farms adopting practices			Number of practices adopted per 100 farms
			Agric. practice	H. E. practice	Any practice	
Farms having extension activities on farm or in home....	140	35	98	61	99	601
Other farms participating in extension activities .....	185	46	96	29	97	391
Farms not participating in extension activities .....	79	19	58	10	60	138



County Agents, Crop Specialist, and Interested Farmers Co-operate in Checking Yields at a Result Demonstration

**Contact with extension workers.**—All but 10 per cent of the farms had made contacts with some member of the extension service staff. That methods which bring extension agents in touch with the

farmers are effective, is brought out by the fact that 55 per cent more of the farms in the contact group had changed practices than of the no-contact group, and more than four times as many practices were reported adopted per 100 farms. Contact with extension workers was even more significant in the adoption of home practices than in the adoption of farm practices (Table 18).

Table 18. Contact with Extension Workers as Related to Change of Practices

Group	Number of farms	Percentage of all farms	Percentage of farms adopting practices			Number of practices adopted per 100 farms
			Agric. practice	H. E. practice	Any practice	
Farms having made contact with extension workers.....	365	90	94	39	96	450
Farms having made no contacts	39	10	38	8	41	77

### Boys' and Girls' Club Work

Five hundred and nineteen boys and girls between the ages of 10 and 20 years were found in 53 per cent of the homes visited. Twenty per cent of these children were enrolled in club work at the time the study was made, and an additional 10 per cent had been engaged in junior project work at some previous time. The average age of the club members was 13.4 years, and 18 per cent of the 1927 club members were not in school. Junior result demonstrations influenced 1.5 per cent of all the improved farm and home practices reported (Table 19).

Table 19. Farms Represented in Junior Project Work and Number of Boys and Girls Enrolled

Farm and home records obtained.....	404
Percentage of families with children of club age (10-20 years).....	53
Number of children of club age (10-20 years).....	519
Per cent of families with boys and girls in clubs (at any time).....	21
Number of boys and girls in club work (at any time).....	156
Percentage of boys and girls (10-20 years) in club work (at any time).....	30
Percentage of boys and girls in club work (1927).....	20
Average age of boys and girls in club work (1927).....	13.4
Percentage of 1927 club members not in school.....	18.3
Percentage of all practices adopted due to junior result demonstrations.....	1.5

### Attitude Toward Extension

An estimate was made of the family's attitude toward the extension service. Seventy per cent were considered favorable to the work and 5 per cent opposed, while the other 25 per cent were classed as indifferent (Table 20).

Table 20. Attitude Toward Extension

Item	Number	Percentage
Farm records obtained.....	404	..
Farms reported favorable .....	284	70
Farms reported indifferent .....	100	25
Farms reported opposed .....	20	5

### Summary

This study is based on information obtained from 404 non-selected farms and homes in Lyon and Blue Earth Counties, Minn.

Ninety per cent of the farms and homes visited had adopted some improved practice as the result of extension. Eighty-nine per cent had changed agricultural practices and 36 per cent home economics practices.

The highest number of agricultural practices reported was in connection with the poultry, dairy, alfalfa, and swine projects. In the home economics group the food preservation and clothing projects led in importance.

Sixty-six per cent of the farms reporting improved practices mentioned the influence of publicity methods, 48 per cent personal service methods, 34 per cent object lesson methods, and 65 per cent the indirect spread from neighbors. The influence of the county agricultural agent was reported by 88 per cent of the farms adopting practices, the home demonstration agent 14 per cent (Blue Earth County 30 per cent) and the specialists 43 per cent. Thirty-one per cent had received help from volunteer local leaders.

The methods mentioned most frequently in connection with practices adopted follow in the order named: indirect influence, general meetings, office calls, news stories, method demonstrations, farm visits, and bulletins. Forty-seven per cent of the practices adopted were influenced by one or more methods of a publicity nature, 28 per cent by personal service, and 14 per cent by object lesson methods.

A slightly higher percentage of farmers who were land owners had been reached by extension than of those who were tenants.

The percentage of farms and homes adopting improved practices and the number of practices adopted per 100 farms increased proportionately with the acreage of the farm.

The effectiveness of extension was not appreciably affected by the distance at which a farmstead was removed from the county extension office or by the nature of the road on which it was located.

The telephone is an important means of informing people regarding extension activities rather than a direct means of disseminating subject matter information.

Whether the farmer or the farm woman has attended high school or college has an important bearing upon the adoption of extension practices.

Four times as many practices were adopted per 100 farms by the farms having contacts with extension agents as of those which had not made such contacts, indicating the very great importance of methods which make for wide participation in extension activities and frequent contacts with extension workers.

Twenty per cent of the 519 boys and girls of club age were enrolled in club work at the time the study was made, and an additional 10 per cent had been club members previously.

Seventy per cent of the farmers were favorable to extension work, 5 per cent opposed, and 25 per cent indifferent.

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